ECOREGION Widely distributed and migratory stocks
STOCK European seabass in the Northeast Atlantic

Advice for 2013

ICES advises on the basis of the approach to data-limited stocks that commercial catches should be no more than 6000 tonnes. ICES recommends that implementation of 'input' controls should be promoted. This is the first year ICES is providing quantitative advice for data-limited stocks (see Quality considerations).

Stock status

F (Fishing Mortality)		
	2009–2011	
Qualitative evaluation	?	Insufficient information

SSB (Spawning-stock Biomass)		
	2010–2012	
Qualitative evaluation	?	Insufficient information

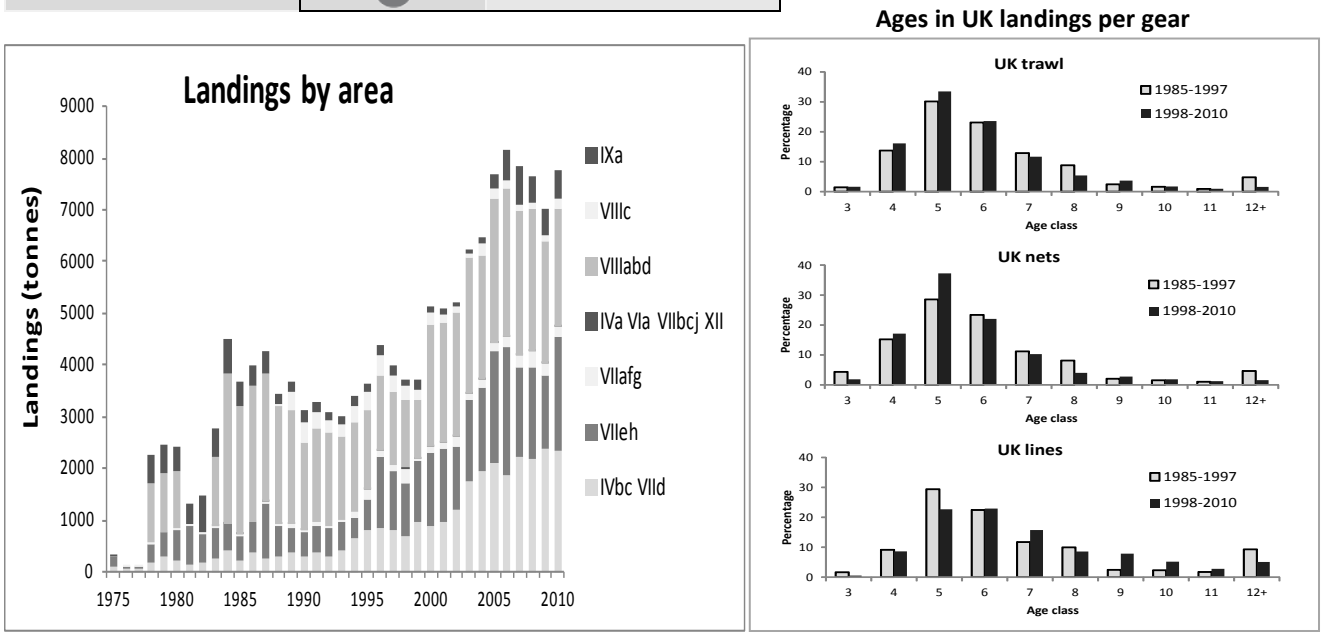

Figure 9.4.23.1 European seabass in the Northeast Atlantic. ICES commercial landings (tonnes) and average age compositions of UK commercial landings during 1985–1997 and 1998–2010 for trawls, nets, and lines in Subareas IV and VII.

Commercial fishery catches of all gear types exhibit a broad age range, and fish of over 20 years of age are recorded in most years, suggesting relatively low mortality rates historically. Catches are strongly influenced by intermittent strong year classes and periods of poor recruitment. The 1989 year class is very strong in all data sets (Figure 9.4.23.2) and contributed to the landings in the 1990s. The increase in landings since the mid-1990s coincided with a northward expansion of the stock and establishment of fisheries in the North Sea during a period of above-average sea temperatures.

Management plans

No specific management objectives are known to ICES. There is no TAC for this species.

Biology

Seabass grow slowly, do not mature until 4–7 years of age, and have been recorded up to 28 years of age. Juvenile bass up to three years of age occupy nursery areas in estuaries whilst adults undertake seasonal migrations from inshore habitats to offshore spawning sites where they are targeted by pelagic trawlers. After spawning, seabass tend to return to the same coastal sites each year. The combination of slow growth, late maturity, spawning aggregation, and strong site fidelity, increase the vulnerability of seabass to over-exploitation and localized depletion. ICES highlights that the stock is currently treated as a single unit in the entire North East Atlantic. However, considering its strong site fidelity, natal homing and high residency, future assessment and management should identify and treat separate spawning aggregations independently.

Environmental influence on the stock

Ocean warming in recent decades has likely led to the more northerly distribution of seabass, which are now found further north into the North Sea. The increase in sea temperature may also be responsible for adult seabass remaining for a longer period of the year in the near-shore areas of the English Channel and Celtic Sea.

The fisheries

Sea bass are targeted by pelagic trawlers on offshore spawning grounds during November to April, and are taken as seasonal target or bycatch by a large fleet of inshore vessels using a variety of gears. Discarding is low except for some small-mesh trawl fleets operating inshore. Bass in ICES Divisions VIIIc and IXa are mainly caught by Spanish (Basque) trawlers and artisanal Portuguese fleets using lines and gillnets. In Ireland, commercial fisheries for bass have been banned since 1990. Seabass is an important marine recreational angling species in the UK, Ireland, France, and the Netherlands.

Effects of the fisheries on the ecosystem

Trawling and gillnetting for seabass often results in an unintended bycatch of marine mammals (ICES, 2010a).

Quality considerations

Recreational fisheries are likely to contribute substantially to fishery removals in some areas, and time-series of catches, releases, and size/age composition are needed. Stock structure in Subareas IV, VII and VIII remain poorly defined and further studies are needed using tagging, genetics, and other population/individual markers. Historical sampling of fishery catches is of variable quality, and data should be collected representatively across the fleets taking seabass. Time-series of relative abundance indices are needed for both the adult and pre-recruit components of the stock.

The advice is based on a precautionary reduction of catches because of missing or non-representative data. The methods applied to derive quantitative advice for data-limited stocks are expected to evolve as they are further developed and validated.

Scientific basis

Assessment type	Data-limited stocks, category 5.2.0.
Input data	None.
Discards and bycatch	A low rate of discarding is observed in most seabass fisheries.
Indicators	Commercial landings.
Other information	A benchmark for this stock is planned for 2012.
Working group report	WGNEW

ECOREGION Widely distributed and migratory stocks
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Reference points

No reference points have been defined for this stock.

Outlook for 2013

No reliable quantitative assessment is currently available for European seabass in the Northeast Atlantic. Therefore, no catch projections are available.

ICES approach to data-limited stocks

For data-limited stocks without information on abundance or exploitation ICES considers that a precautionary reduction of catches should be implemented, unless there is ancillary information clearly indicating that the current exploitation is appropriate for the stock.

For this stock, ICES advises that total catches should decrease by 20% in relation to the last three years (2008–2010) average catch, corresponding to commercial catches of no more than 6000 t in 2013.

Additional considerations

Management considerations

ICES reiterates its previous recommendation that *implementation of 'input' controls (preferably through technical measures aimed at protecting juvenile fish, in conjunction with entry limitations into the offshore fishery in particular) should be promoted* (ICES, 2004). Any consideration of catch limitation (output control) would need to take into account that seabass are a bycatch in mixed fisheries to a various extent, depending on gear and country; this incites discarding and should be avoided.

Management of seabass fisheries needs to take into account the distinctive characteristics and economic value of the different fisheries. Seabass is of high social and economic value to the large inshore artisanal fleets and to sea angling and other recreational fishing that contribute substantially to local economies.

It is currently not clear how management units should be defined in Subareas IV, VII and VIII in relation to stock structure. As bass is, at present, a non-TAC species, there is potential for displacement of fishing effort from other species with limiting quotas.

It is not yet clear whether the populations in the North Sea and Celtic Sea ecoregions can be treated as separate stocks for management purposes. There is insufficient information to evaluate the stock status of the European seabass in the Northeast Atlantic area.

Biology

Seabass (*Dicentrarchus labrax*) is a widely distributed species in Northeast Atlantic shelf waters from southern Norway, through the North Sea, the Irish Sea, the Bay of Biscay, Atlantic Iberian Waters, the Mediterranean, and the Black Sea to Northwest Africa. The stock structure of this species is currently uncertain although there is evidence that seabass around southern Ireland and in the Bay of Biscay could be treated as two populations separate from seabass in the eastern Celtic Sea, English Channel, and North Sea. Seabass on the north Brittany coast may, however, be linked to the population in the Bay of Biscay.

Mature seabass aggregate offshore to spawn, which occurs during January–March in the Bay of Biscay and from February to May in the English Channel and eastern Celtic Sea. The larvae drift inshore to nursery areas in creeks, estuaries, and shallow bays where they remain for at least two years. Three-year-old fish migrate to over-wintering areas in deeper water, returning to large estuaries in summer. Older bass are more wide-ranging, and mature individuals undertake annual migrations between inshore feeding areas and offshore spawning sites. Tagging studies show that seabass are often recaptured close to where they were released, despite mixing on offshore spawning grounds, indicating strong association with particular coastal sites.

Quality considerations

Recreational fisheries are significant and not included in the landings applied to advice. Surveys in France in 2009–2010 estimated that the recreational fishery (angling and non-angling gears) in the Atlantic area caught 3200 t of seabass (standard error 1600 t), of which 830 t was released. In the same period commercial fisheries in France landed around 5000 t.

From 1999 onwards, French landings data from FishStat are replaced by more accurate figures from a separate analysis of logbook and auction data..

In the Iberian waters (ICES VIIIc and area IX) where two species of *Dicentrarchus* are caught, the landings of Portuguese and other fleets prior to 2006 are mainly recorded as mixed seabass species. Previous ICES advice has included "unallocated" landings, representing the difference between UK estimates from a fleet census and logbook scheme for bass fishing boats and the official statistics. This scheme is under review and the landings estimates are not presented this year pending findings of the review.

Regulations

The official minimum landing size is 36 cm (EC regulation 850/98). In addition, a variety of national restrictions on commercial sea bass fishing are also in place, including licensing, individual landings limitations, larger MLS and seasonal/ area closures. Depending on country, measures affecting recreational fisheries include minimum landing sizes, bag limits and gear restrictions.

Data requirements

Time-series of relative abundance indices need to be developed throughout the range of the stock, for both the adult and pre-recruit components of the stock.

There is a need to ensure adequate and representative sampling coverage of fleets catching seabass, including developing regional time-series of recreational fishery catch, effort, and catch composition.

Further studies using tagging, genetics, and other stock and individual markers are needed to more accurately define stock boundaries suitable for assessment and management purposes.

Studies have been made that document the survival of recreationally caught and released seabass.

Comparison with previous assessment and advice

The interpretation of the state of the stock has not changed. The advice last year was based on precautionary considerations, the advice this year is based on ICES approach to data-limited stocks.

Sources

ICES. 2004. Report of the ICES Advisory Committee on Fishery Management and Advisory Committee on Ecosystems (Section 4.4.15, Atlantic seabass), 2004. ICES Advice. Volume 1, Number 2. 1544 pp.

ICES. 2010a. Report of the Study Group on Bycatch of Protected Species (SGBYC), 1–4 February 2010, Copenhagen, Denmark. ICES CM 2010/ACOM:25. 123 pp.

ICES. 2010b. Report of the Working Group on Assessment of New MoU Species (WGNEW), 11–15 October 2010, ICES HQ, Denmark. ICES CM 2010/ACOM: 21.

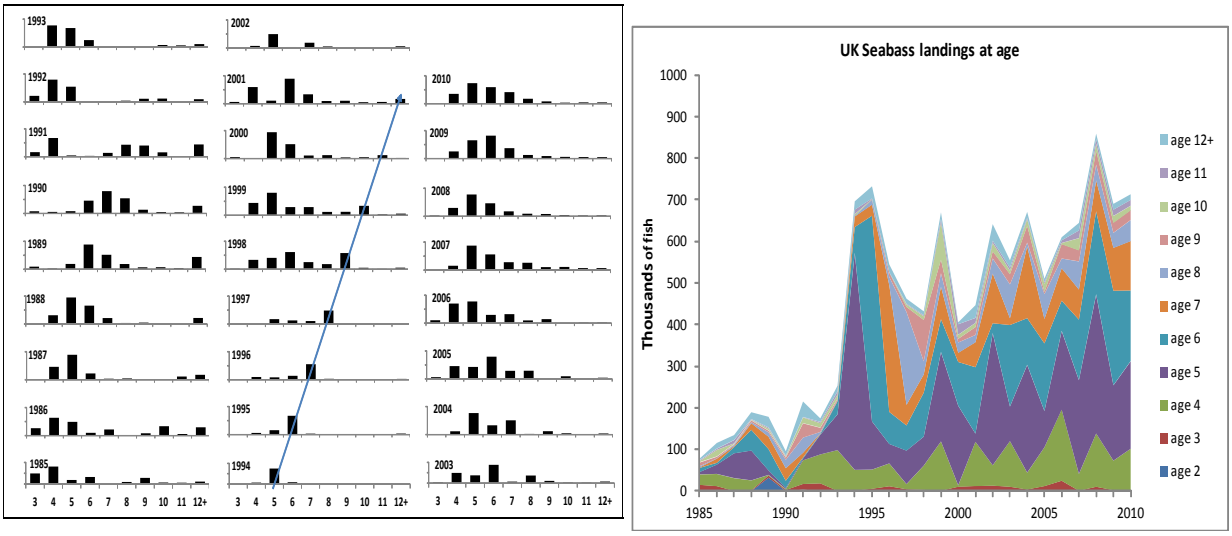

Figure 9.4.23.2. Seabass in the Northeast Atlantic. Age composition of UK landings of seabass from all areas, 1985–2010. Left: percentage composition by age in each year (catches in a year add up to 100). The strong 1989 cohort is highlighted. Right: actual numbers-at-age in each year.

Table 9.4.23.1 Seabass in the Northeast Atlantic. ICES advice, management, official landings, and ICES landings.

Year	ICES Advice	Predicted catch corresp. to advice	Agreed TAC	Official landings	ICES landings
2000	-	-	none	4.7	5.1
2001	-	-	none	4.6	5.1
2002	No increase in effort or F	-	none	4.7	5.2
2003	No increase in effort or F	-	none	6.0	6.2
2004	No increase in effort or F	-	none	6.0	6.5
2005	-	-	none	6.9	7.7
2006	-	-	none	7.6	8.2
2007	-	-	none	7.5	7.9
2008	-	-	none	5.3	7.7
2009	-	-	none	7.5	7.0
2010	-	-	none	8.2	7.8
2011	-	-	none		
2012	No increase in catch	-	none		

2013	20% Reduction in catches (last 3 years' average)	< 6.0

Weights in thousand tonnes.

Table 9.4.23.2 Seabass in **Divisions IVb,c, and VIId**. Official landings by country and ICES estimates of catches (t).

	Belgium	Denmark	France	France[1] (ICES)	Netherlands	UK(Sco)	UK(E,W&NI)	Total (ICES)
1984	0	0	324	324	0	0	76	400
1985	0	0	144	144	0	0	75	219
1986	0	0	295	295	0	0	92	387
1987	0	0	180	180	0	0	84	264
1988	0	0	199	199	8	0	101	308
1989	0	1	272	272	2	0	91	366
1990	0	<0.5	210	210	0	0	71	281
1991	0	<0.5	222	222	0	0	168	390
1992	0	<0.5	204	204	0	0	83	287
1993	0	1	282	282	0	0	146	429
1994	0	<0.5	279	279	0	0	357	636
1995	0	1	339	339	0	<0.5	475	815
1996	0	1	527	527	4	<0.5	318	850
1997	0	1	487	487	1	<0.5	322	811
1998	0	2	372	372	32	<0.5	282	688
1999	0	1	0	611	32	3	333	980
2000	0	5	701	612	60	<0.5	217	894
2001	0	2	701	681	74	0	205	962
2002	0	1	858	868	94	6	245	1214
2003	133	1	1206	1197	158	3	269	1761
2004	119	1	1159	1318	188	0	308	1934
2005	149	1	1126	1377	319	1	276	2123
2006	150	2	1086	1145	299	6	250	1852
2007	128	1	1340	1429	373	24	252	2207
2008	118	<0.5	1020	1290	375	41	352	2176
2009	125	<0.5	1623	1483	389	20	353	2370
2010	175	4	1452	1363	391	26	393	2352

Source: ICES Bulletin Statistique.
[1]Landings supplied to WGNEW by Ifremer.

Table 9.4.23.3 Seabass in **Divisions VIIe,h**. Official landings by country and ICES estimates of catches (t).

	Belgium	Denmark	France	France[1] (ICES)	Channel Islands	Netherlands	Spain	UK(Sco)	UK(E,W&NI)	Total (ICES)
1984	0	0	444	444	25	0	0	0	39	508
1985	0	0	432	432	18	0	0	0	19	469
1986	0	0	543	543	15	0	0	0	21	579
1987	0	0	1019	1019	14	0	0	0	16	1049
1988	0	18	509	509	12	0	0	0	30	569
1989	0	1	390	390	48	0	0	0	39	478
1990	0	0	389	389	25	0	0	0	91	505
1991	0	0	434	434	16	0	0	0	44	494
1992	0	0	475	475	36	0	0	0	40	551
1993	0	0	422	422	45	0	0	0	51	518
1994	0	0	306	306	49	0	0	0	68	423
1995	0	0	424	424	69	0	0	0	101	594
1996	0	0	1135	1135	56	4	0	0	162	1357
1997	0	0	907	907	74	0	0	0	150	1131
1998	0	0	784	784	79	16	0	0	163	1042
1999	0	0	0	752	108	0	0	4	312	1176
2000	0	0	699	1137	130	0	0	0	139	1406
2001	0	0	754	1149	80	3	0	0	170	1402
2002	0	0	649	902	73	2	0	0	243	1220
2003	2	0	651	1258	84	5	0	0	233	1582
2004	4	0	670	1237	159	3	0	0	231	1634
2005	3	0	712	1750	220	8	0	0	162	2143
2006	6	0	985	2075	193	9	0	1	199	2483
2007	6	0	691	1314	160	3	0	28	243	1754
2008	7	0	454	1402	143	5	<0.5	<0.5	217	1774
2009	2	0	1256	1140	103	6	0	3	183	1437
2010	2	0	1940	1825	144	8	0	35	191	2205

Source: ICES Bulletin Statistique.
[1]Landings supplied to WGNEW by Ifremer.

Table 9.4.23.4 Seabass in **Divisions VIIa,f&g**. Official landings by country and ICES estimates of catches (t).

	Belgium	France	France(ICES)[1]	Ireland	UK(Sco)	UK(E,W&NI)	Total	Total(ICES)
1984	0	0	0	0	0	27	27	27
1985	0	44	44	0	0	11	55	55
1986	0	3	3	0	0	11	14	14
1987	0	27	27	3	0	23	53	53
1988	0	6	6	0	0	42	48	48
1989	0	13	13	0	0	61	74	74
1990	0	10	10	0	0	27	37	37
1991	0	70	70	0	0	27	97	97
1992	0	42	42	0	0	25	67	67
1993	0	14	14	0	0	33	47	47
1994	0	8	8	0	0	110	118	118
1995	0	38	38	0	<0.5	131	169	169
1996	0	41	41	0	<0.5	82	123	123
1997	0	35	35	0	<0.5	88	123	123
1998	0	207	207	0	<0.5	42	249	249
1999	0	0	0	0	<0.5	32	32	32
2000	0	122	56	0	<0.5	50	228	106
2001	0	164	54	0	0	83	301	137
2002	0	73	55	0	0	133	261	188
2003	19	46	16	<0.5	0	81	162	116
2004	36	54	49	0	3	75	217	163
2005	54	99	34	0	1	72	260	161
2006	55	45	39	<0.5	0	118	257	212
2007	44	43	28	0	1	168	284	241
2008	63	32	58	0	1	180	334	302
2009	46	26	26	0	1	138	237	211
2010	38	49	49	0	1	91	228	179

Source: ICES Bulletin Statistique.
[1]Landings supplied to WGNEW by Ifremer.

Table 9.4.23.5 Seabass in **Divisions IVa, VIa, and VIIb,c,j&k, and Subarea XII**. Official landings by country (t).

	Belgium	Denmark	France	Ireland	Netherlands	Norway	Spain	UK(Sco)	UK(E,W&NI)	Total
1984	0	0	1	0	0	0	0	0	0	1
1985	0	0	1	0	0	0	0	0	<0.5	1
1986	0	0	0	0	0	0	0	0	<0.5	0
1987	0	0	0	1	0	0	0	0	0	1
1988	0	0	0	0	3	0	0	0	0	3
1989	0	0	4	1	0	0	0	0	0	5
1990	0	0	0	1	0	0	0	0	0	1
1991	0	0	0	0	0	0	0	0	<0.5	0
1992	0	0	0	0	0	0	0	0	<0.5	0
1993	0	0	0	0	0	0	0	0	<0.5	0
1994	0	0	0	0	0	0	0	0	<0.5	0
1995	0	0	0	0	0	0	0	<0.5	8	8
1996	0	0	0	0	0	0	0	<0.5	3	3
1997	0	0	0	0	0	0	0	0	<0.5	0
1998	0	<0.5	0	0	0	0	40	<0.5	10	50
1999	0	0	0	0	0	0	0	<0.5	1	1
2000	0	0	1	0	0	0	3	<0.5	<0.5	4
2001	0	0	2	0	0	0	3	0	0	5
2002	0	0	2	0	0	0	<0.5	0	12	14
2003	0	0	1	0	1	<0.5	0	0	<0.5	2
2004	<0.5	0	3	0	0	<0.5	1	0	<0.5	4
2005	0	0	2	0	0	0	0	0	0	2
2006	0	0	2	0	0	<0.5	0	<0.5	<0.5	2
2007	0	<0.5	6	0	0	<0.5	0	<0.5	<0.5	6
2008	0	0	5	0	0	<0.5	<0.5	0	<0.5	5
2009	0	0	4	1	0	<0.5	0	0	0	5
2010	0	0	9	0	0	0	0	0	0	9

Source: ICES Bulletin Statistique.

Table 9.4.23.6 Seabass in **Division VIIIa,b&d.** Official landings by country and ICES estimates (t).

	Belgium	France	France (ICES)[1]	Netherlands	Spain	UK(Sco)	UK(E,W&NI)	Total (ICES)
1984	0	2886	2886	0	0	0	0	2886
1985	0	2477	2477	0	0	0	0	2477
1986	0	2607	2607	0	0	0	0	2607
1987	0	2474	2474	0	0	0	5	2479
1988	0	2277	2277	0	0	0	15	2292
1989	0	2215	2215	0	0	0	0	2215
1990	0	1679	1679	0	0	0	0	1679
1991	0	1779	1779	0	17	0	0	1796
1992	0	1762	1762	0	14	0	0	1776
1993	0	1599	1599	0	14	0	0	1613
1994	0	1711	1711	0	17	0	0	1728
1995	0	1549	1549	0	0	0	0	1549
1996	0	1459	1459	0	0	0	14	1473
1997	0	1416	1416	0	0	0	12	1428
1998	0	1263	1263	0	27	0	4	1294
1999	0	0	1117	0	11	0	2	1130
2000	0	2081	2295	0	67	0	<0.5	2362
2001	0	2025	2238	3	68	0	0	2309
2002	0	1943	2216	0	182	0	0	2398
2003	<0.5	2814	2497	0	127	0	2	2626
2004	<0.5	2561	2284	0	96	0	6	2386
2005	0	3192	2722	0	74	0	4	2800
2006	0	3322	2707	0	168	0	2	2877
2007	1	2985	2677	0	79	0	1	2758
2008	0	1508	2600	0	146	<0.5	<0.5	2746
2009	1	2341	2152	0	201	0	0	2354
2010	0	2333	2089	0	167	2	0	2258

Source: ICES Bulletin Statistique.
[1]Landings supplied to WGNEW by Ifremer.

Table 9.4.23.7 Seabass in **Division VIIIc.** Official landings by country (t).

	France	Portugal[1]	Spain	Total
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	<0.5	0	0
1988	14	<0.5	0	14
1989	0	1	325	326
1990	1	<0.5	395	396
1991	2	1	300	303
1992	0	<0.5	254	254
1993	0	<0.5	247	247
1994	0	2	306	308
1995	0	<0.5	334	334
1996	0	<0.5	376	376
1997	0	<0.5	290	290
1998	0	<0.5	258	258
1999	0	<0.5	221	221
2000	2	<0.5	239	241
2001	<0.5	<0.5	166	166
2002	8	<0.5	75	83
2003	1	1	73	75
2004	39	1	181	221
2005	57	1	139	197
2006	2	2	151	155
2007	1	1	114	116
2008	0	1	141	142
2009	6	6	126	138
2010	2	2	196	200

Source: ICES Bulletin Statistique.
[1]Contains mixed landings of two seabass species, particularly before 2006.

Table 9.4.23.8 Seabass in **Division IXa.** Official landings by country (t).

	Denmark	France	Portugal[1]	Spain[1]	Total
1984	0	0	431	250	681
1985	0	0	311	164	475
1986	0	0	219	182	401
1987	0	0	216	194	410
1988	0	0	115	93	208
1989	0	0	104	92	196
1990	0	0	90	146	236
1991	0	0	76	111	187
1992	0	0	53	94	147
1993	0	0	57	104	161
1994	0	0	55	134	189
1995	0	0	42	112	154
1996	0	0	48	158	206
1997	0	0	39	184	223
1998	0	0	38	115	153
1999	0	0	37	134	171
2000	0	0	49	90	139
2001	0	0	42	69	111
2002	0	0	43	46	89
2003	<0.5	0	46	40	86
2004	0	0	66	75	141
2005	0	0	176	80	256
2006	0	0	459	117	576
2007	0	0	544	228	772
2008	0	0	402	111	513
2009	0	2	413	86	501
2010	0	0	487	90	577

Source: ICES Bulletin Statistique.
[1]Contains mixed landings of two seabass species, particularly before 2006.